

The relationship between skilled labor and technical change

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This study investigates whether capital-skill complementarity is the explanation for skill-biased technical change. For this to be the case, capital-skill complementarity must exist in the first place and, secondly, all technical change must be embodied in nature, i.e. embedded in new capital equipment. To test if these conditions are satisfied, a capital-age adjusted translog production function incorporating both embodied and disembodied technical change is implemented on a 14-industry panel for Swedish manufacturing 1985-95. The findings cast doubt on the claim that capital-skill complementarity can explain skill-biased technical change. In several industries, the capital-skill complementarity hypothesis is not supported. Moreover, it is found that the demand for skilled labor is affected by both disembodied and embodied technical change. An additional important result is that there is a negative skill-bias associated with embodied technical change.